CLAIMS LISTING

1. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 10 to 60 mol percent;

a metaphosphate, Al(PO3)3, from 10 to 60 mol percent;

a fluoride, BaF_2 + RFx, wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2, and BiF_3, from 10 to 80 mol percent; and

a rare earth dopant selected from a group consisting of neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); ~~an oxide of manganese (Mn);~~ and mixtures thereof.

2. (Previously presented) A fluorophosphates glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 10 to 60 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 10 to 60 mol percent;

a fluoride, RFx, from 10 to 80 mol percent, selected from the group consisting of: BaF_2, CaF_2, MgF_2, PbF_2, and BiF_3; and

a dopant.

3. (Canceled)

4. (Currently amended) The glass as in claim 2 wherein the dopant is selected from the group comprising: the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), ~~an oxide of manganese (Mn);~~ and mixtures thereof.

5. (original) The glass as in claim 4 wherein the dopant is selected from the oxides of the rare earth elements.

6. (Previously presented) The glass as in claim 4 wherein the dopant on a weight percent basis is 2 to 15 percent.

7. (original) The glass as in claim 4 wherein the dopant is selected from the fluorides of the rare earth elements.

8. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 10 to 60 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 10 to 60 mol percent;

a fluoride, BaF_2 + RFx, wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2, and BiF_3, from 10 to 80 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), ~~an oxide of manganese (Mn);~~ and mixtures thereof.

9. (currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 5 to 90 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 90 mol percent;

a fluoride, BaF_2 + RFx, wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2, and BiF_3, from 5 to 90 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr); samarium (Sm), europium (Eu), ~~an oxide of manganese (Mn);~~ and mixtures thereof.

10. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 10 ~~mol~~ to 45 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 30 mol percent;

a fluoride, BaF_2 + RFx, wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2, and BiF_3, from 45 to 85 mol percent; and

a dopant, from 2 to 15 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), prasedymium (Pr); samarium (Sm), europium (Eu), ~~an oxide of manganese (Mn);~~ and mixtures thereof.

11. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, approximately 10 mol percent;

a metaphosphate, $Al(PO_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2, approximately 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of neodymium (Nd).

12. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, approximately 10 mol percent;

a metaphosphate, $Al(PO_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2, approximately 72 mol percent; and

a dopant, approximately 20 weight percent: of the oxide of erbium (Er).

13. (Withdrawn) A method for making fluorophosphates glass comprising the steps of:

batching the glass components;

melting the glass components to form a molten mixture;

cooling the molten glass mixture to a solid states;

annealing the glass in the solid state;

slowly cooling the annealing glass to approximately ambient temperature;

the glass components comprised on a mol percent basis of:

$Ba(PO_3)_2$ from 10 to 60 percent;

$Al(PO_3)_3$ from 10 to 60 percent;

a fluoride selected from the group of BaF_2, CaF_2, MgF_2, PbF_2, and BiF_3 from 10 to 75 percent; and

a dopant from 2 to 15 percent on a mol percent basis selected from the group of Nd_2O_3, Er_2O_3, Yb_2O_3, Tm_2O_3, Tb_2O_3, Ho_2O_3, Pr_2O_3 and MnO and mixtures thereof.

14. (Withdrawn) The method as in claim 13 wherein the melting of the glass is performed in the temperature range of 1,200 °C to 1,250 °C in platinum crucibles in a dry argon atmosphere for from 4 to 5 hours.

15. (Withdrawn) The method as in claim 13 wherein the annealing of the glass is performed in the temperature range of 320 °C to 340°C for from 8 to 10 hours.

16. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 5 to 60 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 60 mol percent;

a fluoride, BaF_2+RFx wherein RFx is selected from a group consisting of CaF_2, MgF_2, PbF_2, and BiF_3, from 10 to 90 mol percent;

a dopant; and

wherein the selection of the mol percent for the fluroride, $BaF_2 + RF_x$ is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

17. (Canceled)

18. (Currently amended) The glass as in claim 16 wherein the dopant is selected from the group comprising of: the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), samarium (Sm), europium (Eu), praseodymium (Pr); ~~an oxide of manganese (Mn);~~ and mixtures thereof.

19. (Original) The glass as in claim 18 wherein the dopant is selected from the oxides of the rare earth elements.

20. (Previously presented) The glass as in claim 18 wherein the dopant on a weight percent basis is 2 to 15 percent.

21. (Original) The glass as in claim 18 wherein the dopant is selected from the fluorides of the rare earth elements.

22. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 5 to 60 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 60 mol percent;

a fluoride, BaF_2+RFx selected from the group comprising of CaF_2, MgF_2, PbF_2 and BiF_3, from 10 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); ~~an oxide of manganese (Mn);~~ and mixtures thereof.

23. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 5 to 90 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 90 mol percent;

a fluoride, BaF_2+RFx wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2 and BiF_3, from 5 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); ~~an oxide of manganese (Mn);~~ and mixtures thereof.

24. (Currently amended) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, from 5 to 45 mol percent;

a metaphosphate, $Al(PO_3)_3$, from 5 to 30 mol percent;

a fluoride, BaF_2+RFx wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2 and BiF_3, from 45 to 90 mol percent; and

a dopant, from 2 to 20 weight percent, selected from the group consisting of: the oxides of the rare earth elements neodymium (Nd), erbium (Er), ytterbium (Yb), thulium (Tm), terbium (Tb), holmium (Ho), praseodymium (Pr), samarium (Sm), europium (Eu); ~~an oxide of manganese (Mn);~~ and mixtures thereof; and

wherein the selection of the mol percent for the fluroride, $BaF_2 + RF_x$ is a determining factor from which the mol percent of the metaphosphates are selected to provide a 100 percent mol composition for the fluorophosphate glass.

25. (Previously prsented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, approximately 10 mol percent;

a metaphosphate, $Al(PO_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2+RFx wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2 and BiF_3, approximately 72 mol percent; and

a dopant, approximately 5 weight percent: of the oxide of neodymium (Nd).

26. (Previously presented) A fluorophosphate glass formed from a composition comprising:

a metaphosphate, $Ba(PO_3)_2$, approximately 10 mol percent;

a metaphosphate, $Al(PO_3)_3$, approximately 18 mol percent;

a fluoride, BaF_2+RFx wherein RFx is selected from the group comprising of CaF_2, MgF_2, PbF_2 and BiF_3, approximately 72 mol percent; and

a dopant, approximately 10 weight percent: of the oxide of erbium (Er).

27. (Withdrawn) A method for making fluorophosphates glass comprising the steps of:

batching the glass components;

melting the glass components to form a molten mixture;

cooling the molten glass mixture to a solid states;

annealing the glass in the solid state;

slowly cooling the annealing glass to approximately ambient temperature;

the glass components comprised on a mol percent basis of:

$Ba(PO_3)_2$ from 10 to 60 percent;

$Al(PO_3)_3$ from 10 to 60 percent;

a fluoride of BaF_2 + RFx where RFx is selected from the group of, CaF_2, MgF_2, PbF_2, and BiF_3 from 10 to 90 percent; and

a dopant from 2 to 20 percent on a mol percent basis selected from the group of Nd_2O_3, Er_2O_3, Yb_2O_3, Tm_2O_3, Tb_2O_3, Ho_2O_3, Pr_2O_3, Sm_2O_3, Eu_2O_3 and MnO and mixtures thereof.

28. (Withdrawn- currently amended) The method as in claim [[13]] 27 wherein the melting of the glass is performed in the temperature range of 1,200 °C to 1,250 °C in platinum crucibles in a dry argon atmosphere for from 4 to 5 hours.

29. (Withdrawn - currently amended) The method as in claim [[13]] 27 wherein the annealing of the glass is performed in the temperature range of 320 °C to 340°C for from 8 to 10 hours.

30. (New) The fluorophosphate glass as set forth in claim 1, wherein: the dopant is comprised of an oxide of manganese Mn.

31. (New) The fluorophosphate glass as set forth in claim 4, wherein: the dopant is comprised of an oxide of manganese Mn.

32. (New) The fluorophosphate glass as set forth in claim 8, wherein: the dopant is comprised of an oxide of manganese Mn.

33. (New) The fluorophosphate glass as set forth in claim 9, wherein: the dopant is comprised of an oxide of manganese Mn.

34. (New) The fluorophosphate glass as set forth in claim 10, wherein: the dopant is comprised of an oxide of manganese Mn.

35. (New) The fluorophosphate glass as set forth in claim 18, wherein: the dopant is comprised of an oxide of manganese Mn.

36. (New) The fluorophosphate glass as set forth in claim 22, wherein: the dopant is comprised of an oxide of manganese Mn.

37. (New) The fluorophosphate glass as set forth in claim 23, wherein: the dopant is comprised of an oxide of manganese Mn.

38. (New) The fluorophosphate glass as set forth in claim 24, wherein: the dopant is comprised of an oxide of manganese Mn.